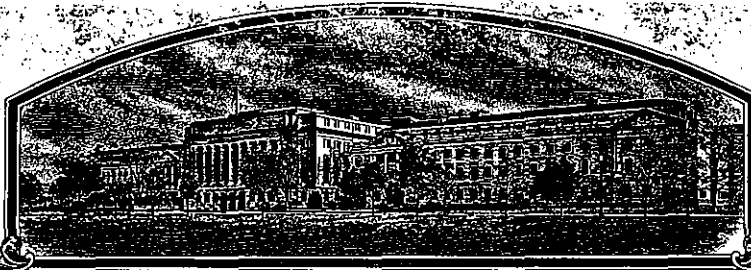


No.

200300175



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Seed Research of Oregon

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC DEPOSIT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO SELL OR OTHERWISE OFFER OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

FESCUE, TALL

'Titan Ltd.'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twentieth day of September, in the year two thousand and seven.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER Seed Research of Oregon		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME SRX 8M094		3. VARIETY NAME Titan Ltd.	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 27630 Llewellyn Rd. Corvallis, OR 97333		5. TELEPHONE (include area code) 541-757-2663		FOR OFFICIAL USE ONLY PVPO NUMBER 200300175 FILING DATE 2/26/2003 FILING AND EXAMINATION FEES: \$ 3,652.00 DATE 2/26/2003 CERTIFICATION FEE: \$ 768.00 DATE 8/28/2007	
		6. FAX (include area code) 541-752-2065			
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Corporation		8. IF INCORPORATED, GIVE STATE OF INCORPORATION OR			
		9. DATE OF INCORPORATION 1983			
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Dr. Leah A. Brilman Seed Research of Oregon 27630 Llewellyn Rd. Corvallis, OR 97333				FILING AND EXAMINATION FEES: \$ 3,652.00 DATE 2/26/2003 CERTIFICATION FEE: \$ 768.00 DATE 8/28/2007	
11. TELEPHONE (include area code) 541-758-9115		12. FAX (include area code) 541-752-2065		13. E-MAIL srofarm@attglobal.net	
14. CROP KIND (Common Name) Tall fescue		15. GENUS AND SPECIES NAME OF CROP Festuca arundinacea		16. FAMILY NAME (Botanical) Poaceae	
17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)		19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act	
<input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) <input checked="" type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		<input type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input checked="" type="checkbox"/> NO (If "no", go to item 22)		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)		22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	

24. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER

Leah A. Brilman

NAME (Please print or type)

Leah A. Brilman

SIGNATURE OF OWNER

NAME (Please print or type)

CAPACITY OR TITLE

Research Director

DATE

2-25-03

CAPACITY OR TITLE

DATE

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office
Telephone: (301) 504-5518
FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>

200300178

ITEM

- 18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) evidence of uniformity and stability; and (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

August 30, 2002

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center—East, Beltsville, MD 20705. Telephone: (301) 504-8089. <http://www.ams.usda.gov/tsp/seed.htm>

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 3.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

ST-470 (02-10-2003) designed by the Plant Variety Protection Office with Word 2000. Replaces former versions of ST-470, which are obsolete.

EXHIBIT A.**ORIGIN AND BREEDING HISTORY OF 'Titan Ltd.' TALL FESCUE**

'Titan Ltd.' tall fescue (*Festuca arundinacea*) (SRX 8MO94) is an advanced generation cultivar selected based on phenotypic characteristics of spaced plants and their progeny, and progeny turf plots. The germplasm used in the development of the variety have a diverse origin. Many were developed by the Vista Research Project of CalWest and Research Seeds and traces back to released varieties and other clones to varieties developed by Seed Research of Oregon. In the spring of 1992 Seed Research of Oregon, Inc. assumed control of the Vista Turf Research Project through an agreement with Research Seeds. Seed Research, then evaluated the program, and integrated portions of the selected material into the breeding program of Seed Research. Whether from the Vista Turf Project or from Seed Research's program all of the clones used in this project underwent an additional cycle of selection for brown patch resistance, stress tolerance and turf quality at Columbia, MO as outlined below.

Initiated in 1988 the Vista project employed a three pronged approach to improving tall fescues. Utilizing released varieties they placed them in spaced plant nurseries in Pratum, OR, Columbia and Mt. Vernon, MO and Woodland, CA. In Pratum, OR the spaced plants were evaluated for disease resistance, growth form and height, color, leaf fineness, and seed yield, with selection of superior plants performed by Dr. Jonathan Reich of CalWest on visits to Oregon. In Woodland, CA Dr. Reich had spaced plants mown and subjected to drought stress, with selection of superior plants based on turf quality and drought stress. The best plants were dug up in the fall and sent to Oregon, for determination of their production characteristics the following year. At Columbia and Mt. Vernon, MO the spaced plants were also mown, inoculated with five virulent strains of brown patch, *Rhizoctonia solani*, at Columbia or allowed to develop brown patch with natural disease populations at Mt. Vernon. These plants were then evaluated for disease resistance, turf quality, and color by Dr. David Sleper, with the best plants sent to Oregon in the fall as above. The seed harvested from the best plants in Oregon each year were sent to both California and Missouri for establishment of progeny turf plots to enable analysis of turf quality and drought resistance or brown patch resistance respectively. Progeny spaced plants were also used at each location to perform the next cycle of selection. In Oregon crossing blocks were established using plants with similar characteristics and recombination blocks were established where the progeny of the best plants could be evaluated, selected and harvested for the continuation of the cycles.

In 1992 the Research Department of Seed Research of Oregon assumed control of this project. The plots and spaced plants at Woodland, CA were eliminated in the fall of 1991 after moving the most promising plants to Oregon and sending turf data to Oregon. Analysis of turf data from Missouri and California, combined with maturity, plant height, seed yield and stem rust data from Oregon allowed elimination of at least half the plants at

200300175

Pratum, OR. Beginning in the spring of 1992 additional plants were eliminated based on the presence of net blotch and appearance in Oregon. The plants were rouged throughout the summer based on appearance, stem rust incidence, and potential seed yield, combined with summer performance and brown patch resistance in Missouri.

Approximately 174 plants were harvested from this planting in 1992. The plants with the best seed yields were used to establish turf plots at Columbia, MO, Fairwood Sod Farm in Maryland and at Adelphia, NJ in the fall of 1992. In addition, spaced plants from this material and from Seed Research's breeding program were established at Columbia, MO and evaluated as above by Drs. David Sleper, Leah Brilman and Sulieman Bughrara. The best 96 plants were dug up in the fall of 1994 and shipped to Oregon for seed production evaluation.

In 1995 25 clones were selected based on high seed yield, fine texture and darker green color. A new breeder block of 35 progeny from each clones was established in the fall of 1995. The seed from the 25 clones was also used to establish turf plots in Missouri. This block was rouged based on seed yield, reduced stem rust, and fine texture. Additional rows were removed based on turf performance of progeny. New turf plots were established in Virginia and Missouri with seed from these rows.

In the fall of 1997 seed from remaining progeny of nine of these clones, matched for turf performance, heading date, fine leaf texture and high seed yields were established in a new breeder block. Progeny from the seed of one row, S44BE, of the breeder block designated SRX 8430, derived from the variety Grande through the same breeding strategy above through cycles in Missouri and Oregon, was included in this block due to superior turf performance but earlier maturity than the remainder of that block. Thirteen rows of 35 plants each were established and rouged for uniformity in heading and height, reduced stem rust, fine leaf texture, dark green color and high seed yields. Only nine rows had endophyte and contributed both maternally and paternally to the final variety. The rows, number of plants remaining, and the origins of the original clones are as follows.

<u>Clone</u>	<u>Origin</u>	<u>Plant number</u>
P114-5	8220 13-9E (SR 8200, 2 cycles)	20
P118-10	8010 5-6E (Titan 2)	62
P119-15	OR 901 37-24E (Shortstop)	30
S44BE	SRX 8430E (Grande)	35
P115-6	MO 891 67-29E (Titan)	20
P117-8	CA 891 43-38E (Shortstop)	26
<u>P114-10</u>	<u>8010 7-8E (Titan 2)</u>	<u>31</u>
	Total E plants	224
P118-8	OR 901 37-24 NE (Shortstop)	55
P115-16	OR 901 69-34 NE (Shortstop)	33
<u>P117-8</u>	<u>CA 903 29-43 NE (Bonsai)</u>	<u>30</u>
	Total NE (Pollen only)	118

The origin lists the original variety the single plant was selected from. This single plant had progeny planted from it and again a single plant was selected from the progeny to become the P number plant. Progeny of these then went through multiple cycles before the final population was established. The progeny of the variety Titan, through Titan 2 and itself, contributed 50 % of the plants that were used for the breeder seed. The 224 plants with endophyte in the above block were harvested for the final breeder seed. The first breeder seed harvest was in 1999.

Titan Ltd. is a stable and uniform variety. A few variants that are taller and with wider leaves than the rest of the variety have been observed in foundation field (less than 1%), but have never been observed in our PVP nurseries of seventy plants established with the same seed so the percentage is less than 1.4 %. The first foundation field was established in the fall of 1999 along with turf plots of the final composite and the initial PVP nursery. The same percentage of variants have been found in certified production, although the taller plants were rouged from the foundation field. Three generations of increase are approved.

EXHIBIT B.**'TITAN LTD. ' TALL FESCUE NOVELTY STATEMENT**

'Titan Ltd.' tall fescue most closely resembles Titan and Shortstop but can be distinguished based on the following:

Titan Ltd. can be distinguished from Titan by the following;

- 1) Titan Ltd has a significantly shorter plant height than Titan (Tables 3 and 4).
- 2) Titan Ltd has significantly narrower flag leaf and subtending leaf widths than Titan (Tables 5 and 6).

Titan Ltd. can be distinguished from Shortstop by the following:

- 1) Titan Ltd has significantly earlier heading and anthesis dates than Shortstop (Tables 1 and 2).

U.S. DEPARTMENT OF AGRICULTURE
PLANT VARIETY PROTECTION OFFICE, AMS, USDA
NATIONAL AGRICULTURAL LIBRARY Bldg., Rm. 500
10301 BALTIMORE Blvd.
BELTSVILLE, MD 20705

OBJECTIVE DESCRIPTION OF VARIETY
TALL & MEADOW FESCUES
(*Festuca* spp.)

NAME OF APPLICANT(S) Seed Research of Oregon	TEMPORARY DESIGNATION SRX 8MO94	VARIETY NAME Titan Ltd.
---	---	-----------------------------------

ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code) 7630 Llewellyn Rd. Corvallis, OR 97333	FOR OFFICIAL USE ONLY PVPO NUMBER 200300175
---	--

Place the appropriate number that describes the varietal characteristic of this variety in the boxes below. Use leading zeroes when necessary (e.g. 09). Characteristics described, including numerical measurements, should represent those that are typical for the variety. Measured data should be for SPACED PLANTS. Royal Horticultural Society or any recognized color fan may be used to determine plant colors. Characteristics marked with an asterisk * are characteristics which should be recorded.

1. SPECIES: (With comparison varieties, use varieties within the species of the application variety)

X 1 = *F. arundinacea* (Tall) Turf Types

1 = Kentucky 31	2 = Rebel	3 = Olympic	4 = Bonanza	5 = Arid	6 = Rebel II
7 = Shortstop	8 = Silverado	9 = Rebel Jr.	10 = Mini Mustang	11 = Crewcut	12 = Bonsai

Forage Types

20 = Kentucky 31	21 = Martin	22 = Forager	23 = Mozark
24 = Kenhy	25 = AU Triumph	26 = Fawn	27 = Cajun

 2 = *F. pratensis* (Meadow)

30 = Admira	31 = Beaumont	32 = Comtessa	33 = Ensign	34 = Trader
-------------	---------------	---------------	-------------	-------------

2. CYTOLOGY:

42 Chromosome Number

ADAPTATION: (0 = Not Tested; 1 = Not Adapted; 2 = Adapted)

2 Transition Zone 2 West 2 Northeast Other (Specify): _____

3. MATURITY: (Date First Headed, 10% of Panicle Emergence)

4 Maturity Class 1 = Very early () 2 = AU Triumph 3 = Early (Fawn) 4 = K31, Kenhy 5 = Medium (Rebel)
6 = Bonanza 7 = Late (Silverado) 8 = 9 = Very late

Date Headed 113.9 2001 data Location Corvallis, OR

7 Days earlier than 7

Maturity same as 4 Comparison Variety

 Days later than

5. MATURE PLANT HEIGHT CM: (Average of 100 culms from crown to top of panicle, if panicle is nodding, straighten)

112.6 cm Height

9.8 cm shorter than Titan

Height same as _____ Comparison Variety

_____ cm taller than _____

* INTERNODE LENGTH CM: (First internode subtending the flag leaf)

44.0 cm Internode length

5.0 cm shorter than Titan

Length same as 10 Comparison variety

_____ cm longer than _____

* HEIGHT AT EAR EMERGENCE CM: (Flag leaf height from crown to flag leaf node)

62.8 cm Height

6.6 cm shorter than Titan

Height same as 11 Comparison Variety

_____ cm taller than _____

6. GROWTH HABIT: (Mature Plants)

7 1 = Prostrate () 3 = Semiprostrate () 5 = Horizontal ()
7 = Semierect (Rebel) 9 = Erect (Mini Mustang)

7. RHIZOMES (Psuedo):

_____ mm Length 3 1 = Absent () 2 = Rare (Rebel) 3 = Common ()

8. LEAF BLADE: (Tiller leaves/ turf color)

* 5.5 Color: 1 = Light green () 3 = Medium light green () 5 = Green ()
7 = Medium dark green () 9 = Very dark green ()
5.2 Specify rating of comparison variety 10, 5.2 Titan

* 1 Anthocyanin: 1 = Absent () 9 = Present ()

* 1 Basal Hairs: 1 = Absent () 9 = Present ()

* 5.5 Margins: 1 = Smooth () 5 = Semi-rough () 9 = Rough ()

* 8 Width Class: 1 = Very coarse () 3 = Coarse () 5 = Medium ()
7 = Fine () 9 = Very Fine ()

TILLER LEAF LENGTH CM: (First leaf subtending the flag leaf)

32.9 cm Tiller Leaf Length

10.6 cm shorter than Titan

Length same as _____ Comparison Variety

_____ cm longer than _____

* TILLER LEAF WIDTH MM:

6.2 mm Tiller Leaf Width

1.7 mm narrower than Titan

Width same as 7 Comparison variety

_____ mm wider than _____

8. LEAF BLADE: (continued)

FLAG LEAF LENGTH CM:

FLAG LEAF WIDTH MM:

15.5 cm Flag Leaf Length

4.0 mm Flag Leaf Width

_____ cm shorter than _____

1.3 mm narrower than 7

Length same as 8 Comparison Variety

Width same as 12 Comparison variety

_____ cm longer than _____

_____ mm wider than _____

9. LEAF SHEATH: (Basal Portion)

* 1 Anthocyanin (seedling): 1 = Absent (K31) 9 = Present ()

* 4 Auricle Hairiness: 1 = Absent () 9 = Present ()

10. PANICLE: (At seed maturity except where noted.)

* 4.3 Shape: 1 = Narrow-tapering () 5 = Ovate (Rebel Jr.) 7 = Oblong () 9 = Other (specify)

* 4.2 Type: 1 = Compact (appressed) 5 = Intermediate () 7 = Open () 9 = Other (specify)

* 7.1 Orientation: 1 = Nodding () 9 = Erect ()

* 1 Branch Pubescence: 1 = Glabrous (53%) 9 = Pubescent (47%)

* 1 Anther Color (At anthesis): 1 = Yellowish Green 2 = Green 3 = Bluish Green (68% 1, 32% 4)
4 = Purplish 5 = Reddish 6 = Other (Specify)

* 1 Glume Color (At anthesis): 1 = Yellowish Green 2 = Green 3 = Bluish Green (63% 1, 29% 2, 8% 5)
4 = Purplish 5 = Reddish 6 = Other (Specify)

* 22.9 cm Panicle Length (from base to tip, if nodding, straighten; after anthesis)

4.2 cm shorter than 1

Length same as 10 Comparison Variety

4.9 cm longer than 12

11. SEED: (With Lemma & Pelea)

* 2208 mg per 1000 seeds

703 mg less than SR 8600

Weight same as Titan Comparison Variety

_____ mg more than _____

LEA: (Keels or Margins) 4.6 Hairs: 1 = Absent () 5 = Short (Missouri 96) 9 = Long ()

EMMA: 1.6 Hairs: 1 = Absent (Kenhy) 5 = Several () 9 = Many (Missouri 96)

5.8 mm Lemma Length (Mature) 1.2 mm Lemma width

0.6 mm shorter than Titan 0.2 mm narrower than SR 8600

Length same as _____ Comparison Variety Width same as _____ Comparison variety

_____ mm longer than 0.2 mm wider than Titan

0. PANICLE: (continued)

*AWNS: 9 AWNS: 1 = Absent () 9 = Present (Falcon) 100% Plants with awns

1.0 mm Awn length (Of those present.)

___ mm Shorter than ___

Length same as Titan Comparison Variety

___ mm Longer than ___

2. DISEASE, INSECT, AND NEMATODE REACTION: (0= Not Tested 1= Least Resistant 9= Most Resistant)

___ Melting-out *Drechslera poae*

___ Blind Seed *Gloeotinia temulenta*

3.3 Leaf Spot *D. siccans*

___ Dollar Spot *Lanzia, Mollerdiscus* spp.

___ Net Blotch *D. dictyoides*

___ Stem Rust *Puccinia graminis*

4.8 Brown Patch *Rhizoctonia solani*

___ T. Blight *Typhula incarnata*

___ C. Leaf Spot *Cercospora fectuae*

___ Pythium Blight *Pythium* spp.

___ Pink Snow Mold *Gerlachia nivalis*

___ Powdery Mildew *Erysiphe graminis*

___ Silver Top *F. tricinatum, F. roseum*

___ Crown Rust *Puccinia coronata*

___ Other Disease _____

___ Other Insect _____

___ Other Nematode _____

3. ENVIRONMENTAL STRESS

___ Drought Stress 1 = Susceptible () 5 = Tolerant () 9 = Resistant ()

___ Shade Stress 1 = Susceptible () 5 = Tolerant () 9 = Resistant ()

___ Winter Stress 1 = Susceptible () 5 = Tolerant () 9 = Resistant ()

4. GIVE VARIETY OR VARIETIES THAT MOST CLOSELY RESEMBLE THE APPLICATION VARIETY. For the following characteristics, indicate the degree of resemblance with the following scale:

= Application variety is less than comparison variety 2 = Same as 3 = More than, better, greater, darker, etc.

Character	Varieties	Rating	Character	Varieties	Rating
Leaf Width	Titan	3	Leaf Color	Titan	3
Panicle Color	Titan (Red)	1	Panicle Shape	Titan (Oblong)	1
Seed Size	Titan	2	Cold Injury		
Stem Color	Titan	2	Heat		
Disease					

5. EXPERIMENTAL: Give a brief summary of the experimental design utilized to collect the data used on this form. Cultural conditions, number of plants measured and plant spacing must be specified. Spaced plants, 3 ft. spacing. 2 replications. Randomized complete block. Tilt applied for stem rust control. Disease - Goal for weed control.

200300175

EXHIBIT D.

ADDITIONAL DESCRIPTION OF THE VARIETY

Table 1. Heading and anthesis dates for tall fescue varieties in 2000. The plants were established in the fall of 1999 with the seed of control varieties obtained from the repository at the Plant Material Center at Pullman, WA or from the breeder. Two replications of 35 plants were established and the number of plants with at least three heads are as shown. Two applications of TILT were applied to the PVP block to control stem rust. Means followed by the same letter are not significantly different at the 0.05 level.

Variety	Plant Number	Heading Date Mean	Anthesis Date Mean
KY-31 NE	68	110.0 a	145.2 ab
KY-31 E	68	110.9 a	146.3 bc
Rendition	70	111.4 a	144.2 a
Titan	69	114.2 b	147.6 c
SR 8600	69	116.1 bc	149.7 e
Rebel II	69	116.8 c	148.9 de
Titan Ltd.	70	117.0 c	147.0 c
MiniMustang	68	117.3 cd	151.1 f
Crewcut	67	119.5 de	152.0 fg
Silverado	69	120.0 ef	152.9 g
Grande	68	120.5 ef	152.3 fg
SR 8500	70	120.6 ef	151.7 fg
Rebel Jr.	69	120.6 ef	152.5 fg
Shortstop	67	121.5 efg	153.1 gh
Bonanza	62	121.7 efg	152.7 g
SR 8210	67	121.7 efg	152.2 fg
Crewcut II	67	121.8 fg	152.6 g
SR 8200	70	123.0 g	152.9 gh
Bonsai	66	123.3 g	154.3 h
LSD @5%		2.3	1.4

Table 2. Heading and anthesis dates for tall fescue varieties in 2001. The plants were established in the fall of 1999 with the seed of control varieties obtained from the repository at the Plant Material Center at Pullman, WA or from the breeder. Two replications of 35 plants were established and the number of plants with at least three heads are as shown. These are the same plants used for data collection in 2000. Two applications of TILT were applied to the PVP block to control stem rust. Means followed by the same letter are not significantly different at the 0.05 level.

Variety	Plant Number	Heading Date Mean	Anthesis Date Mean
KY-31 NE	64	111.6 a	148.8 ab
KY-31 E	69	113.3 ab	149.6 bc
Titan Ltd.	70	113.9 b	147.3 a
Titan	66	116.4 c	149.1 bc
Rebel II	69	116.9 c	150.2 bcd
SR 8600	66	117.1 c	148.9 abc
Rendition	69	117.8 c	150.5 cde
SR 8210	67	120.2 d	152.1 ef
Silverado	69	120.3 d	151.9 def
SR 8500	68	120.4 d	151.7 fg
Crewcut II	66	120.7 de	153.0 fgh
Shortstop	69	121.1 def	153.9 ghij
MiniMustang	65	121.3 def	153.1 fgh
Crewcut	66	122.5 efg	152.5 fg
SR 8200	64	122.7 fg	154.7 hij
Rebel Jr.	69	123.5 gh	155.5 j
Bonanza	62	123.6 gh	152.9 fg
Bonsai	63	123.8 gh	153.4 fghi
Grande	68	124.9 h	155.1 ij
LSD @5%		1.9	1.7

Table 3. Comparative plant morphological measurements of tall fescue varieties in a spaced plant nursery in 2000 near Corvallis, OR. The plants are those described in Table 1. Randomly selected reproductive tillers were selected after anthesis for measurement, with 60 measurements for each characteristic, 30 per rep. Panicle length in this table is that measured in the field on the same tillers used for plant height.

Variety	Plant Height (cm)	Panicle Branch Internode Length (cm)	Height at Ear Emergence (cm)	Plant Width (cm)	Panicle Length (cm)
Bonsai	104.30	23.52	57.83	31.35	20.58
Crewcut II	106.82	21.68	62.43	29.29	23.50
Silverado	109.72	23.45	63.78	31.70	24.57
SR 8500	112.42	22.74	65.64	29.90	25.23
Rendition	114.40	25.97	63.95	34.77	22.47
MiniMustang	115.34	23.91	65.85	35.23	25.85
SR 8600	118.11	25.01	63.80	29.13	26.34
Grande	120.34	26.24	69.77	35.27	28.09
Rebel Jr.	122.22	26.34	70.03	31.68	28.22
Crewcut	122.59	25.63	71.00	36.38	27.75
Shortstop	122.63	24.45	71.36	33.83	26.98
Titan Ltd.	123.22	24.82	72.66	32.74	24.76
SR 8200	126.18	25.97	73.81	33.23	28.91
SR 8210	128.59	27.34	78.06	32.65	28.15
Bonanza	132.91	28.35	79.18	34.59	32.89
Rebel II	135.90	27.95	82.05	37.58	31.24
Titan	136.86	26.97	81.91	32.35	30.81
Kentucky 31 NE	149.21	28.79	90.13	40.08	33.37
Kentucky 31 E	149.63	27.82	92.40	36.98	35.05
LSD @5%	5.11	1.73	4.48	2.45	2.02

Height at ear emergence = flag leaf height

Table 4. Comparative plant morphological measurements of tall fescue varieties in a spaced plant nursery in 2001 near Corvallis, OR. The plants are those described in Table 2. Randomly selected reproductive tillers were selected after anthesis for measurement, with 60 measurements for each characteristic, 30 per rep. Panicle length in this table is that measured in the field on the same tillers used for plant height. These are the same plants used in 2000 but not as many experimental varieties were measured in 2001.

Variety	Plant Height (cm)	Panicle Branch Internode Length (cm)	Height at Ear Emergence (cm)	Plant Width (cm)	Panicle Length (cm)
Rendition	95.00	42.10	47.14	48.51	18.29
Silverado	104.33	40.63	52.86	44.49	20.80
Bonsai	106.74	41.87	56.22	39.44	18.04
SR 8600	108.41	39.75	54.54	44.06	23.87
Titan Ltd.	112.59	44.03	62.78	48.19	22.90
MiniMustang	116.29	45.73	56.70	40.86	22.59
Rebel Jr.	117.09	44.00	56.59	42.05	21.69
Shortstop	117.68	43.32	52.86	44.37	26.02
Titan	122.88	48.96	69.39	43.43	24.44
Crewcut	124.35	45.92	63.87	45.01	25.63
Kentucky 31 E	144.47	56.06	76.94	43.62	27.10
LSD @5%	5.15	4.33	5.27	3.40	3.40

Height at ear emergence = flag leaf height

Table 5. Leaf characteristics of tall fescue varieties in 2000 near Corvallis, OR. The plants are those described in Tables 1 and 3. The leaves were measured on the reproductive tillers utilized in Table 3. The vegetative leaf was measured as the last fully expanded leaf on vegetative tillers on the same plants as described in Table 1 and 2.

Variety	Flag Leaf		Subtending Leaf		Vegetative Tiller Leaf	
	Length (cm)	Width (mm)	Length (cm)	Width (mm)	Length (cm)	Width (mm)
Bonsai	10.74	4.41	16.86	6.06	30.46	6.28
SR 8600	12.54	5.50	20.91	6.64	39.40	6.60
Crewcut II	12.68	4.68	20.02	5.88	33.53	5.64
Crewcut	13.34	5.79	22.36	6.91	42.23	6.65
SR 8500	13.59	4.89	21.31	6.10	35.24	6.49
Silverado	13.87	5.16	22.16	6.51	40.74	6.42
MiniMustang	13.90	4.56	21.97	6.09	41.34	5.92
Titan Ltd.	14.16	4.84	23.41	5.85	40.53	6.09
Rebel Jr.	14.72	5.99	23.66	7.16	42.45	6.28
Titan	14.88	5.68	25.78	7.18	48.58	6.87
Shortstop	14.98	5.55	22.99	6.66	38.06	6.34
Rendition	15.15	5.42	23.61	5.88	35.82	6.25
Grande	15.20	6.01	22.92	7.28	40.82	6.33
SR 8210	15.56	5.55	27.09	6.94	50.90	6.98
SR 8200	15.78	6.26	26.59	7.55	48.78	6.75
Kentucky 31 NE	16.24	6.19	28.00	8.28	54.70	8.93
Kentucky 31 E	16.29	6.81	28.29	9.07	53.92	8.24
Rebel II	17.39	6.13	29.10	7.34	41.21	7.16
Bonanza	17.85	6.61	28.82	8.01	49.21	7.71
LSD@5%	1.86	0.55	2.01	0.54	4.43	0.54

20050015

Table 6. Leaf characteristics of tall fescue varieties in 2001 near Corvallis, OR. The plants are those described in Tables 1 and 3. The leaves were measured on the reproductive tillers utilized in Table 4. The vegetative leaf was measured as the last fully expanded leaf on vegetative tillers on the same plants as described in Table 1 and 2. Less varieties and experimentals were measured in 2001.

Variety	Flag Leaf		Subtending Leaf		Vegetative Tiller Leaf	
	Length (cm)	Width (mm)	Length (cm)	Width (mm)	Length (cm)	Width (mm)
Rendition	14.05	3.95	19.56	4.83	26.47	6.36
Bonsai	14.48	3.95	19.23	4.60	30.52	6.46
Titan Ltd.	15.46	4.03	25.32	5.39	32.94	6.18
Silverado	16.59	4.84	24.84	5.23	38.08	6.05
Titan	16.72	5.69	24.77	6.88	43.47	7.83
Crewcut	16.73	4.90	25.54	5.71	42.01	6.36
Kentucky 31 E	17.20	6.12	24.74	7.36	49.28	8.10
Shortstop	17.54	5.32	22.75	5.99	40.07	6.41
MiniMustang	17.60	5.05	21.47	5.71	36.62	6.41
SR 8600	17.93	5.62	22.52	5.74	33.85	6.03
Rebel Jr.	18.28	5.58	22.84	5.83	39.89	6.44
LSD@5%	2.30	0.55	2.58	0.59	3.32	0.54

Table 7.

1999 Rutgers Tall Fescue Trial -2000, 2001 Data
100 varieties standard trial, SRO Replicated portion 10 additional
Standard varieties plus top and bottom shown

Variety	2000-2001	2000	2001	Brown Patch
	Quality Avg	Quality Avg	Quality Avg	Aug. 2001
Signia	6.1	6.3	5.9	7.0
SRX 8BE4	5.7	5.9	5.5	7.0
Arabia	5.2	5.4	5.0	3.7
Plantation	5.1	5.0	5.1	5.0
Rendition	4.9	4.9	4.9	5.3
Crewcut II	4.6	4.7	4.4	5.7
Titan Ltd.	4.4	4.4	4.4	5.7
Coronado	4.4	4.7	4.0	3.7
Pixie	4.4	4.7	4.0	6.0
Shortstop II	3.9	3.9	3.9	3.7
Kentucky 31	1.2	1.2	1.1	4.0
LSD @ 5%	0.8	0.9	0.8	2.3

Table 8. Performance of tall fescue cultivars and selections in a turf trial seeded in August 2000 at Adelphia, NJ.

Cultivar or Selection		Turf Quality ¹ 2001 Avg.	Seedling Height ² Sept. 2000	Establishment ³ Sept. 2000	Leaf Spot ⁴ Nov. 2000	Brown Patch ⁵ 2001 Avg.
1	DOL comp	6.8	8.3	7.0	6.3	7.2
2	SBM comp	6.5	7.3	7.3	5.7	6.3
3	RB3 comp	6.4	7.3	6.3	6.0	5.7
4	OD3 comp	6.2	6.3	6.3	5.7	7.3
5	10,001 comp	6.2	6.7	6.7	5.7	6.7
6	OD4 comp	6.1	7.7	6.3	5.0	7.2
7	P58	6.1	6.7	7.3	7.3	6.5
8	TF-33	6.1	7.3	6.3	5.7	5.7
9	TF-34	6.1	7.3	6.7	6.3	4.5
10	2nd Millennium	6.1	7.0	6.0	5.3	7.2
11	Syn 578	6.1	5.3	6.3	5.3	7.0
12	Forte	6.1	6.7	6.3	6.0	6.8
13	TF-35	6.1	7.7	6.0	6.0	6.8
14	Justice	6.0	7.0	6.3	4.0	7.5
15	EA 171	6.0	7.7	5.7	4.3	5.3
16	OD1 comp	6.0	6.7	6.7	5.3	6.7
17	OD2 comp	5.9	6.0	6.0	4.7	7.3
18	00 GFA	5.9	5.7	6.0	5.3	6.5
19	Syn 5K1	5.9	6.3	6.0	6.0	6.3
20	SR 8600	5.9	5.0	6.7	6.3	5.7
21	Bingo	5.9	6.7	6.7	4.7	5.0
22	Biltmore	5.8	6.7	5.3	5.3	5.7
23	Syn 5T2	5.8	6.3	6.0	4.7	5.7
24	Syn 5BAB	5.7	6.3	6.3	5.3	6.8
25	00-BFA	5.7	6.0	7.0	4.7	5.2
26	Matador	5.6	8.0	5.7	6.3	4.7
27	Syn 5KU	5.6	7.7	6.3	5.3	6.2
28	BE 4	5.6	8.0	6.3	4.7	5.7
29	Mustang III	5.6	6.0	6.3	5.0	5.7
30	Rendition	5.6	6.7	6.7	5.7	5.8
31	00-H FA	5.6	6.3	6.0	5.0	5.8
32	Syn 5DWF	5.6	7.7	6.7	6.0	5.7
33	E-97	5.6	8.3	6.7	4.0	5.0
34	FA6-91	5.5	6.7	5.7	5.0	5.8
35	Syn-R54M-00	5.5	8.3	6.3	5.3	3.3

(Continued)

Table 8 (continued).

	Cultivar or Selection	Turf Quality ¹ 2001 Avg.	Seedling Height ² Sept. 2000	Establishment ³ Sept. 2000	Leaf Spot ⁴ Nov. 2000	Brown Patch ⁵ 2001 Avg.
36	Syn 5NAS	5.5	6.7	6.3	5.7	5.3
37	SRX 8DDMPP	5.4	6.7	5.7	4.7	6.3
38	MA 176	5.4	7.3	5.7	3.7	6.2
39	Syn 5BEH	5.4	6.3	5.7	5.3	6.0
40	Syn 5BZ	5.4	6.0	5.3	5.0	6.0
41	Southern Comfort	5.4	6.7	6.0	5.0	5.0
42	DLSD	5.4	6.0	6.0	6.0	5.0
43	Syn 5MP	5.4	7.0	6.7	5.7	4.7
44	57E	5.4	6.3	5.7	6.3	4.8
45	TF H-97	5.4	7.0	6.3	5.3	4.2
46	00-J FA	5.4	7.3	6.7	6.3	4.8
47	Picasso	5.4	7.0	6.0	5.3	3.8
48	EA 180	5.3	7.7	6.0	3.3	5.5
49	TF-34	5.3	8.0	6.3	5.0	4.8
50	Syn 5H2	5.3	5.7	5.7	4.7	6.2
51	SRX 8 FFT	5.3	6.7	6.0	4.7	5.5
52	00-CFA	5.3	5.3	5.7	3.7	5.2
53	5BE	5.3	6.3	6.7	4.7	5.5
54	00-A FA	5.3	6.3	6.7	4.7	3.8
55	SRX 8601 E	5.2	5.7	6.0	5.3	6.3
56	Syn 5A3	5.2	6.7	5.7	5.3	5.7
57	Rembrandt	5.2	6.0	6.0	4.7	5.2
58	SRX 8BPDDE	5.2	6.0	6.3	4.7	4.7
59	5301	5.2	.	.	.	6.5
60	Santa Fe	5.2	7.0	5.7	2.0	5.0
61	Crewcut II	5.2	6.0	5.7	5.3	3.7
62	BE1	5.1	6.3	5.7	5.0	6.7
63	Plantation	5.1	5.7	6.7	4.7	5.0
64	MA 157	5.1	7.3	5.7	4.0	4.8
65	TF J-97	5.1	7.0	6.0	4.7	4.5
66	EA 172	5.1	6.3	5.7	3.0	4.2
67	Laramie	5.1	6.0	6.0	5.3	3.7
68	Sun Pro	5.1	6.3	5.3	5.3	5.0
69	MA 160	5.1	7.7	5.0	4.0	4.3
70	Syn-R5JM-00	5.1	7.7	6.3	5.0	2.8

(Continued)

Table 8 (continued).

	Cultivar or Selection	Turf Quality ¹ 2001 Avg.	Seedling Height ² Sept. 2000	Establishment ³ Sept. 2000	Leaf Spot ⁴ Nov. 2000	Brown Patch ⁵ 2001 Avg.
71	CAE comp	5.1	5.7	5.7	4.7	6.5
72	Syn TUO	5.1	6.7	6.7	4.0	5.2
73	Bravo	5.1	4.3	6.3	5.0	4.2
74	EA 155	5.1	6.7	5.7	4.0	4.2
75	MC1	5.0	6.0	5.7	5.0	7.0
76	Syn 5S2	5.0	5.7	5.7	5.7	5.5
77	TF-41	5.0	7.3	6.7	5.0	5.7
78	Syn 5CH	4.9	6.0	5.7	5.0	6.0
79	Pick FA B93	4.9	6.7	5.3	5.0	5.5
80	Syn BRO	4.9	5.3	6.3	4.3	5.3
81	SRX 8DDEOO	4.9	6.3	5.7	4.3	4.2
82	8 S M2	4.9	6.0	5.7	3.3	5.2
83	MA 127 Forbes	4.9	6.7	5.7	2.7	5.2
84	P89 * SpL	4.9	5.3	6.3	5.0	5.2
85	SRX 8 BPDDNE	4.9	5.3	6.3	2.7	5.0
86	ORE-00TF	4.9	4.7	6.0	4.3	4.3
87	Millennium	4.8	5.7	6.3	4.0	5.3
88	EA 163	4.8	6.7	5.3	3.3	4.7
89	Pure Gold	4.8	7.0	6.7	4.3	3.5
90	Syn 5G9	4.8	6.3	5.3	6.0	5.7
91	00-I FA	4.8	6.7	6.0	4.0	4.8
92	00-D FA	4.8	5.0	5.7	4.0	6.3
93	MA 177	4.8	7.7	5.3	3.3	4.7
94	SRX 8EDFF	4.7	4.7	5.3	4.7	4.5
95	Shortstop II	4.7	7.0	5.3	5.3	4.2
96	TF-40	4.7	5.7	6.0	3.3	4.2
97	SRX 8CDEW	4.7	7.0	6.7	3.3	5.0
98	SRX 8MO961	4.7	5.7	6.3	5.0	4.5
99	Prospect	4.6	5.7	6.0	4.3	6.5
100	MA 165	4.6	7.0	5.0	4.0	3.5
101	Apache II	4.6	5.7	6.0	5.0	5.0
102	Coronado Gold	4.6	4.7	6.0	4.7	4.8
103	RT-95	4.6	5.3	6.0	3.3	4.5
104	SR 8500	4.6	5.7	6.0	5.0	5.2
105	GS bulk M2	4.6	6.3	6.3	4.7	3.7

(Continued)

Table 8 (continued).

200300919

	Cultivar or Selection	Turf Quality ¹ 2001 Avg.	Seedling Height ² Sept. 2000	Establishment ³ Sept. 2000	Leaf Spot ⁴ Nov. 2000	Brown Patch ⁵ 2001 Avg.
106	MA 178	4.6	6.3	5.3	3.0	3.3
107	MA 138 JSC	4.5	6.0	6.3	3.7	5.0
108	8OP22	4.5	7.3	5.7	3.0	4.3
109	8RF2	4.5	6.3	6.0	3.0	4.8
110	GS bulk E1	4.5	4.7	6.0	4.0	4.5
111	Coronado	4.5	6.3	6.3	4.7	2.8
112	00-E FA	4.5	5.3	5.3	3.0	5.2
113	Hounddog 5	4.5	4.0	5.7	4.0	4.3
114	Olympic Gold	4.5	4.7	6.0	4.7	4.2
115	MA 158	4.4	8.0	4.7	2.7	5.7
116	Rebel Jr.	4.4	3.7	5.7	3.3	4.7
117	Tarheel	4.4	5.0	5.7	3.7	3.5
118	5UD	4.4	6.3	5.7	4.7	4.7
119	Lancer	4.3	5.0	5.3	4.3	4.3
120	Tomahawk E+	4.3	4.0	6.0	4.7	3.8
121	MA 98 Mtn. View	4.3	6.3	6.0	2.0	4.0
122	TF-43	4.2	5.7	5.3	3.0	5.2
123	P89 * SpE	4.2	6.3	6.0	4.3	3.7
124	TF-42	4.2	5.3	5.3	2.3	5.8
125	Talisman	4.2	6.3	6.0	4.7	4.5
126	Syn 5HUO	4.1	5.7	6.7	3.3	5.7
127	Tomahawk	4.1	3.3	5.7	2.7	4.7
128	Crossfire II	4.1	5.7	5.7	4.3	4.5
129	T991-00	4.0	6.7	5.3	4.3	3.5
130	Regiment	4.0	2.7	5.0	4.0	5.2
131	SRX 8 MO94	4.0	4.3	6.3	3.3	4.8
132	Grande	3.9	3.3	6.3	3.0	5.8
133	Crewcut	3.9	5.0	5.7	4.7	4.2
134	D5 ATF 00-6	3.9	.	.	.	6.7
135	SRX LJHH	3.8	5.0	5.7	3.7	5.3
136	Bonanza II	3.8	3.7	5.3	2.7	3.7
137	SR 8210	3.8	4.3	6.0	3.3	3.7
138	Wolfpack	3.7	4.7	4.7	3.7	5.7
139	Mustang II	3.7	2.7	5.3	2.7	5.3
140	Hilltop TF	3.6	2.3	5.0	2.3	4.0

(Continued)

Table 8 (continued).

	Cultivar or Selection	Turf Quality ¹ 2001 Avg.	Seedling Height ² Sept. 2000	Establishment ³ Sept. 2000	Leaf Spot ⁴ Nov. 2000	Brown Patch ⁵ 2001 Avg.
141	Eldorado	3.6	2.7	4.3	3.7	5.5
142	Confederate	3.6	5.0	4.3	4.0	5.0
143	GT 2K	3.0	4.3	5.0	1.3	4.5
144	Kentucky 31	1.3	1.0	4.0	1.7	5.2
145	Torpedo	1.0	1.0	3.3	1.0	5.7
LSD at 5% =		0.7	1.2	1.1	1.2	2.1

¹9 = best turf quality²9 = shortest seedling height³9 = best establishment⁴9 = least leaf spot⁵9 = least brown patch (average of two ratings taken 8-13-01 and 8-17-01)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

EXHIBIT E

STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S) Seed Research of Oregon	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER SRX 8M094	3. VARIETY NAME Titan Ltd.
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) 27630 Llewellyn Rd. Corvallis, OR 97333	5. TELEPHONE (include area code) 541-757-2663	6. FAX (include area code) 541-752-2065
7. PVPO NUMBER 200700171		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain.

☒ YES☐ NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country.

☒ YES☐ NO

10. Is the applicant the original owner?

☒ YES☐ NOIf no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES☐ NO

If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES☐ NO

If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

All breeding work was done by Seed Research or acquired by Seed Research or under contract to Seed Research.

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.